

Claims:

1. A traffic light (10, 11), comprising:
 - a voltage source (V_S);
 - a first LED circuit including a series connection of a first LED array (30), a first current limiter (31) and a first electronic switch (32) to said voltage source (V_S); and
 - a switch controller (21) operable to selectively open and close said first electronic switch (32),

wherein said first current limiter (31) controls a flow of a first LED current (I_{RL}) from said voltage source (V_S) through said first LED array (30) whenever said switch controller (21) closes said first electronic switch (32), and

wherein the flow of the first LED current (I_{RL}) from said voltage source (V_S) through said first LED array (30) is impeded whenever said switch controller (21) opens said first electronic switch (32).

2. The traffic light (10, 11) of claim 1, further comprising:
 - a second LED circuit connected in parallel to said first LED circuit, said second LED circuit including a series connection of a second LED array (40), a second current limiter (41) and a second electronic switch (42) to said voltage source (V_S),
 - wherein said switch controller (21) is further operable to selectively open and close said second electronic switch (42),
 - wherein said second current limiter (41) controls a flow of a second LED current (I_{YL}) from said voltage source (V_S) through said second LED array (40) whenever said switch controller (21) closes said second electronic switch (42), and
 - wherein the flow of the second LED current (I_{YL}) from said voltage source (V_S) through said second LED array (40) is impeded whenever said switch controller (21) opens said second electronic switch (42).

3. The traffic light (10, 11) of claim 2, further comprising:
 - a third LED circuit connected in parallel to said first LED circuit and said second LED circuit, said third LED circuit including a series connection of a third LED array (50), a third current limiter (51) and a third electronic switch (52) to said voltage source (V_S),
 - wherein said switch controller (21) is further operable to selectively open and close said third electronic switch (52),

wherein said third current limiter (51) controls a flow of a third LED current (I_{GL}) from said voltage source (V_S) through said third LED array (50) whenever said switch controller (21) closes said third electronic switch (52), and

wherein the flow of the third LED current (I_{GL}) from said voltage source (V_S) through said third LED array (50) is impeded whenever said switch controller (21) opens said third electronic switch (52).

4. The traffic light (10, 11) of claim 3, further comprising:

a fourth LED circuit connected in parallel to said first LED circuit, said second LED circuit and said third LED circuit, said fourth LED circuit including a series connection of a fourth LED array (44), a fourth current limiter (45) and a fourth electronic switch (46) to said voltage source (V_S),

wherein said switch controller (21) is further operable to selectively open and close said fourth electronic switch (46),

wherein said fourth current limiter (45) controls a flow of a fourth LED current from said voltage source (V_S) through said fourth LED array (44) whenever said switch controller (21) closes said fourth electronic switch (46), and

wherein the flow of the fourth LED current from said voltage source (V_S) through said fourth LED array (44) is impeded whenever said switch controller (21) opens said fourth electronic switch (46).

5. The traffic light (10, 11) of claim 4, further comprising:

a fifth LED circuit connected in parallel to said first LED circuit, said second LED circuit, said third LED circuit and said fourth LED circuit, said fifth LED circuit including a series connection of a fifth LED array (54), a fifth current limiter (55) and a fifth electronic switch (56) to said voltage source (V_S),

wherein said switch controller (21) is further operable to selectively open and close said fifth electronic switch (56),

wherein said fifth current limiter (55) controls a flow of a fifth LED current from said voltage source (V_S) through said fifth LED array (54) whenever said switch controller (21) closes said fifth electronic switch (56), and

wherein the flow of the fifth LED current from said voltage source (V_S) through said fifth LED array (54) is impeded whenever said switch controller (21) opens said fifth electronic switch (56).

6. A traffic light (60, 61), comprising:
a current source (I_S);
a first LED circuit connected in series to said current source (I_S), said first LED circuit including a parallel connection of a first LED array (80) and a first electronic switch (81); and
a switch controller (71) operable to selectively open and close said first electronic switch (81),
wherein a first LED current (I_{RL}) flows from said current source (I_S) through said first LED array (80) whenever said switch controller (71) opens said first electronic switch (81), and
wherein the flow of the first LED current (I_{RL}) from said current source (I_S) through said first LED array (80) is impeded whenever said switch controller (71) closes said first electronic switch (81).

7. The traffic light (60, 61) of claim 6, further comprising:
a second LED circuit connected in series to said second LED circuit, said second LED circuit including a parallel connection of a second LED array (90) and a second electronic switch (91),
wherein said switch controller (71) is further operable to selectively open and close said second electronic switch (91),
wherein a second LED current (I_{YL}) flows from said current source (I_S) through said second LED array (90) whenever said switch controller (71) opens said second electronic switch (91), and
wherein the flow of the second LED current (I_{YL}) from said current source (I_S) through said second LED array (90) is impeded whenever said switch controller (71) closes said second electronic switch (91).

8. The traffic light (60, 61) of claim 7, further comprising:
a third LED circuit connected in series to said second LED circuit, said third LED circuit including a parallel connection of a third LED array (100) and a third electronic switch (101),
wherein said switch controller (71) is further operable to selectively open and close said third electronic switch (101),

wherein a third LED current (I_{GL}) flows from said current source (I_S) through said third LED array (100) whenever said switch controller (71) opens said third electronic switch (101), and

wherein the flow of the third LED current (I_{GL}) from said current source (I_S) through said third LED array (100) is impeded whenever said switch controller (71) closes said third electronic switch (101).

9. The traffic light (60, 61) of claim 8, further comprising:

a fourth LED circuit connected in series to said fourth LED circuit, said fourth LED circuit including a parallel connection of a fourth LED array (93) and a fourth electronic switch (94),

wherein said switch controller (71) is further operable to selectively open and close said fourth electronic switch (94),

wherein a fourth LED current flows from said current source (I_S) through said fourth LED array (93) whenever said switch controller (71) opens said fourth electronic switch (94), and

wherein the flow of the fourth LED current from said current source (I_S) through said fourth LED array (93) is impeded whenever said switch controller (71) closes said fourth electronic switch (94).

10. The traffic light (60, 61) of claim 9, further comprising:

a fifth LED circuit connected in series to said fifth LED circuit, said fifth LED circuit including a parallel connection of a fifth LED array (103) and a fifth electronic switch (104),

wherein said switch controller (71) is further operable to selectively open and close said fifth electronic switch (104),

wherein a fifth LED current flows from said current source (I_S) through said fifth LED array (103) whenever said switch controller (71) opens said fifth electronic switch (104), and

wherein the flow of the fifth LED current from said current source (I_S) through said fifth LED array (103) is impeded whenever said switch controller (71) closes said fifth electronic switch (104).